REMARKS

The Final Office Action mailed July 26, 2006 has been reviewed and carefully considered. Claims 1-12 have been canceled and new claims 13-24 have been added. Claims 13-24 are pending. Reconsideration of the claims in view of the remarks provided herein below and withdrawal of the present rejections are respectfully requested.

In paragraph 2 on page 2 of the Office Action, claims 1-5 and 7-11 were rejected under § 102(e) as being anticipated by Mao. In paragraph 4 on page 3 of the Office Action, claims 6 and 12 were rejected under § 103(a) as being unpatentable over Mao.

Applicant respectfully traverses the rejection, but in the interest of expediting prosecution has canceled claims 1-12 and added new claims 13-24. Applicant respectfully submits that Mao fails to disclose, teach or disclose the present invention as recited in the new claims.

Mao discloses a spin valve head having a free layer and an antiferromagnetic layer, wherein the antiferromagnetic layer is formed over the free layer. A first pinned layer is formed below the free layer. A second pinned layer is formed below the first pinned layer. The first pinned layer, free layer and antiferromagnetic layer have a first wide and the second pinned layer has a second width, wherein the second width is wider than the first width.

However, Mao fails to suggest, as recited in independent claims 13 and 19, a first pinned layer having a first width and a first magnetic orientation and a free layer, disposed above the first pinned layer and separated from the firsst pinned layer by a spacer, the free layer having a second width disposed above the first pinned layer, wherein the second width is smaller than the first width.

Rather, according to Mao, the free layer, disposed above the first pinned layer and separated from the first pinned layer by a spacer, and the first pinned layer have the same width.

In addition, Mao fials to suggest the use of a ferromagnetic bias layer. Instead, Mao only shows an antiferromagnetic layer for exchange biasing the free layer. In contrast, claims 13 and 19 recite a ferromagnetic bias layer disposed above the free layer and an antiferromagnetic bias layer disposed above the ferromagnetic bias layer, the ferromagnetic bias layer being exchange coupled to the antiferromagnetic layer.

Accordingly, Mao fails to disclose, teach or suggest every element recited in independent claims 13 and 19. Accordingly, Applicants respectfully submit that independent claims 13 and 19 are patentable over Mao.

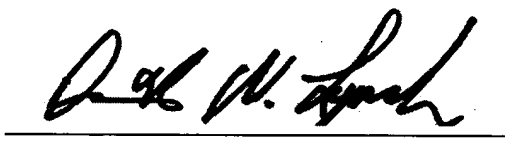
Dependent claims 14-18 and 20-24 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims 13 and 19, respectively. Further dependent claims 14-18 and 20-24 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 14-18 and 20-24 are patentable over the cited references. .

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 423-757-0264.

Respectfully submitted,

Chambliss, Bahner and Stophel
1000 Tallan Building
Two Union Square
Chattanooga, TN 37402
423-757-0264

By: 

Name: David W. Lynch
Reg. No.: 36,204